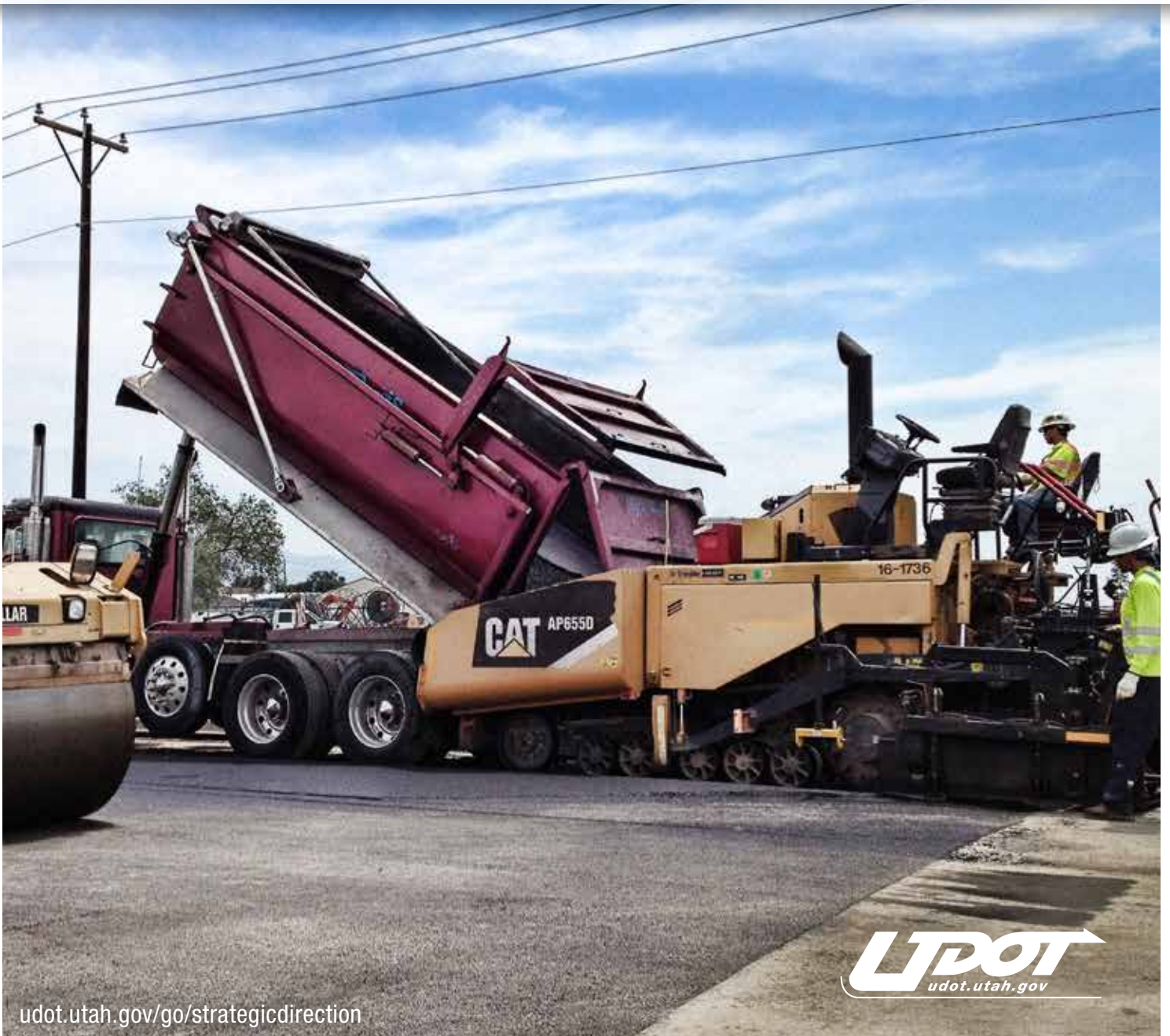


UTAH DEPARTMENT OF TRANSPORTATION

2014 STRATEGIC DIRECTION & PERFORMANCE MEASURES



udot.utah.gov/go/strategicdirection

UTDOT
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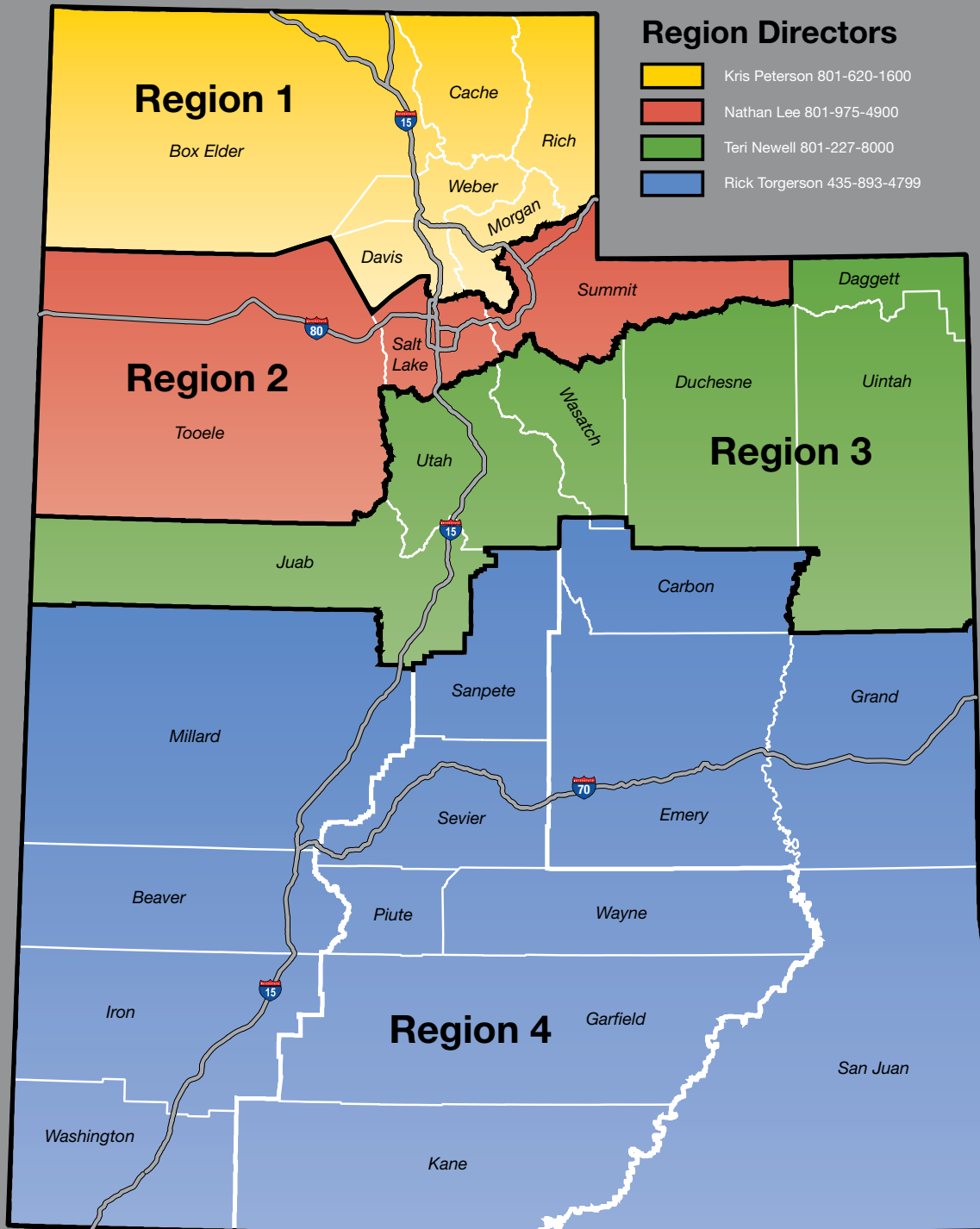
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UTAH DEPARTMENT OF TRANSPORTATION



STRATEGIC DIRECTION

January 2014

In 2001 I began serving the Utah Department of Transportation as Deputy Director, a position I was privileged to hold for 12 years. While serving under John Njord, we worked toward the goal of making Utah an even more extraordinary place to live, work and play with a world-class transportation system. In pursuit of that goal, we wrote the first Strategic Direction document in 2003 to provide a clear written explanation and plan for achieving it.

Since then, much has happened. In April of 2013, I was named Executive Director of UDOT, an opportunity for which I am both thrilled and grateful. We completed the fastest mega-project in United States' history with the \$1.7 billion I-15 CORE project. And in the 11 years since the first Strategic Direction document, which was only four pages with three strategic goals, our Vision has grown into what you are reading today.

Despite change and continual movement, much remains consistent. Our goals to Preserve Infrastructure and Optimize Mobility are as important today as ever, and the goal to Improve Safety has been furthered with an even greater commitment to achieve Zero Fatalities. Two years ago, we also formally added a strategic goal that has been an implicit motivation from the beginning: Strengthen the Economy.

Our focus on preserving infrastructure remains central to planning and operations. Our tiered approach to managing budgets and maintenance projects was born of necessity, but it has taken hold as a cultural shift in the way we take care of what we've got. As a result of careful planning, we are able to benefit even more miles of road to ensure transportation that is safe and effective for drivers today and in generations to follow.

We are also doing more with what we've got by seeking new solutions to Optimize Mobility. In 2013, with projects such as I-15 CORE and Access Utah County completed, fewer resources have been dedicated to adding capacity. Instead, we are innovating with new technologies such as Flex Lanes, Continuous Flow Interchanges and ThrU Turns. We are implementing integrated transportation solutions to accommodate a rising number of bicyclists, pedestrians and transit users. And our traffic signal group continues to reduce delays and improve traffic flow with refinements to signal plans, especially for special event traffic.

Despite an ongoing downward trend in the number of fatalities on Utah roads, we still have much work ahead to reach our goal of Zero Fatalities. Of the five driving behaviors most likely to cause fatalities, wearing a seat belt has perhaps the greatest impact for the least amount of individual effort. With just a simple click, passengers are 40 times more likely to survive a crash. Our current and upcoming outreach concentrates on the importance of wearing a seat belt as we educate the public about this important step in protecting Utahns on our roads.

We have seen incredible economic development near projects as the advantage of quality infrastructure serves existing commerce and entices new businesses to make Utah home. Completion of the I-15 CORE project alleviated a bottleneck on a vital freight corridor, which is essential to the health of our economy. Proper planning, construction and maintenance of our transportation system continues to be closely linked with the economic strength we enjoy.

We have seen many successes in recent history, and I hope to build upon that foundation by adding six Emphasis Areas and Core Values to the Strategic Direction. These areas and values aren't new. In fact, our ability to execute in these areas has been crucial to our history of success. I believe that by making a conscious effort to become stronger in these areas, we will improve performance on our four strategic goals while providing the public and our partners with maximum value, exceptional quality of life and sound confidence in the way we serve them.

I look forward to the year ahead and the opportunity to serve in this new role. We are certain to see continual transformation in our industry and the Department, but I believe as we carry forward our Strategic Direction we will continue to earn our reputation for being an organization that blazes a path for positive change. If you have any questions or ideas related to UDOT's Strategic Direction, please call or email me. I look forward to hearing from you.

Sincerely,



Carlos Braceras
Executive Director
801-965-4027
cbraceras@utah.gov

Emphasis Areas

- Integrated Transportation
- Collaboration
- Education
- Transparency
- Quality
- Operational Excellence

Core Values

- Innovation
- Dedication
- Integrity
- Public Responsiveness
- Passion
- Fiscal Responsibility

THE UTAH TRANSPORTATION COMMISSION

MEETING UTAH'S TRANSPORTATION NEEDS

The Utah Transportation Commission works in partnership with UDOT to provide a quality transportation system for all of Utah.

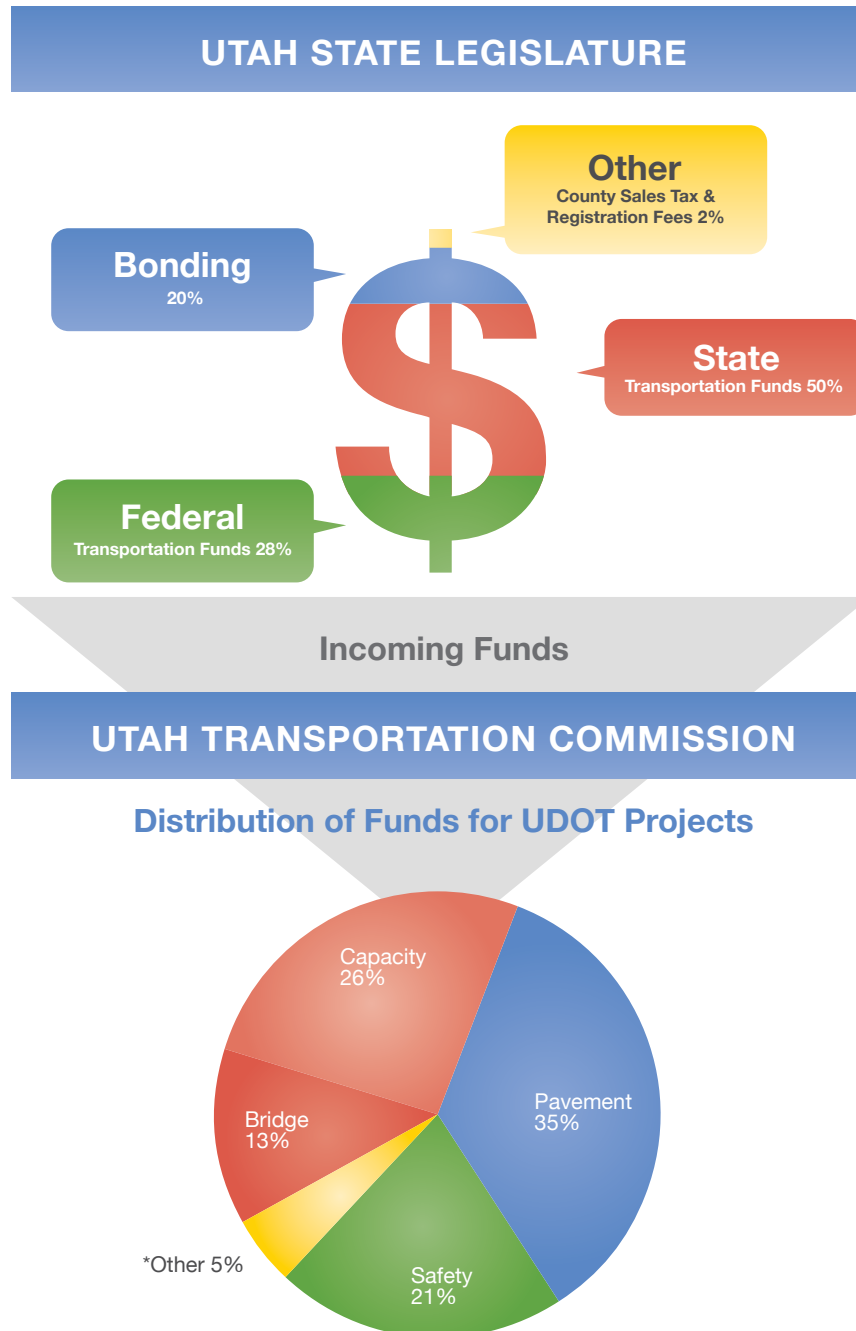
The Commission is comprised of seven members. Their roles and responsibilities, as defined in Utah Code 72-1-303, include:

- Determine priorities and funding levels of projects in the state transportation system considering a prioritization of needs provided by the Department.
- Determine additions and deletions to the state highway system.
- Take public comment about transportation matters at scheduled Commission meetings.
- Make policies and rules under the Rulemaking Act, §63-46a, necessary to perform the Commission's duties.
- Approve establishment of tollways for new state highways or new capacity lanes under §72-6-118.
- Advise the Department on state transportation systems policy.
- Review administrative rules made, amended or repealed by the Department.
- Annually review public transit plans. In addition, one commissioner serves as a non-voting member of the Board of Trustees for the Utah Transit Authority.

To find more information about the commissioners, visit udot.utah.gov/go/commission. Each commissioner may be contacted directly or through the Commission Secretary.

AVAILABLE TRANSPORTATION FUNDING 2013

UDOT operates its programs from a combination of federal, state and local funds. Amounts and percentages change from year to year.



21 percent of funding is dedicated specifically to safety projects, however, all categories address safety concerns.

**other projects include trials, studies, ATMS/ITS and some federal MPO funds.*

THE CHALLENGE

MEETING UTAH'S TRANSPORTATION NEEDS

The demands on Utah's transportation system continue to be substantial. Population growth and higher vehicle miles traveled have created demand for increased capacity. Increased system use has also put a strain on scarce resources to preserve and extend the life of roads and bridges.

Expanding and preserving our system will require improved efficiency, careful use of resources and close partnering with decision makers.

Growth Also Creates Opportunity

Investing in transportation helps meet today's needs and builds a solid foundation for continued economic expansion and success. By building a strong and capable transportation system, UDOT can help facilitate, enable and stimulate economic prosperity.

Population Growth vs. Lane Miles

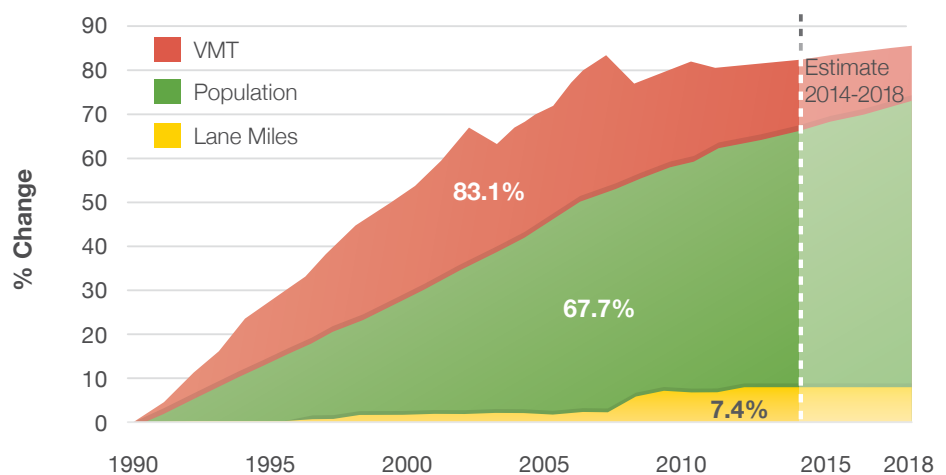
Between 1990 and 2013, Utah's population increased by 68 percent and the number of vehicle miles traveled (VMT*) increased by 83 percent but capacity increased by 7.5 percent.

Projections show that by 2015, travel will increase by 85 to 90 percent, population by 70 to 80 percent and new capacity by seven percent. By 2050 more than five million people will call Utah home, making it one of the fastest growing states in the country.

*VMT is a measure of the total number of vehicle miles traveled on a specific road segment over a given period of time. In this document, UDOT is using systemwide numbers calculated yearly.

UTAH STATEWIDE GROWTH TRENDS

VMT and population growth exceed increased transportation capacity, measured in new lane miles added to the system. Projections show growth will continue.



Increased VMT gives rise to:

Traffic Delay: Utahns along the Wasatch Front experience 100,000 hours of systemwide delay per day. Improvements planned through 2030 will help maintain mobility.

Increased Wear and Tear: UDOT maintains nearly 6,000 centerline miles of roadways across the state, an investment worth tens of billions of dollars. In order to protect that investment, the transportation system must be kept in good condition.

Vehicle-Related Crashes: With increased traffic and vehicles, UDOT is working diligently on solutions to bring fatal crashes to zero.



SR-89 before pavement preservation.



SR-89 after pavement preservation.

UDOT Can Meet The Challenge

Finding ways to meet transportation needs while keeping our current system in good condition require resourcefulness and innovative thinking. The state Unified Plan identifies \$54.7 billion in critically needed transportation investment to ensure good mobility as population grows more than 60 percent. UDOT recognizes the importance of a multi-modal transportation system that includes accessible rail and bus transit, safe connections, bicycle friendly roads and facilities and safe, congestion free roads and highways. By focusing on our Strategic Goals we are able to meet the challenges of an ever growing and changing state.

Strategic Goals:

- Preserve Infrastructure
- Optimize Mobility
- Zero Fatalities
- Strengthen the Economy

Strategic Goal

PRESERVE INFRASTRUCTURE

UDOT is preserving Utah's existing transportation infrastructure. The state's multi-billion dollar investment in roads, bridges and other assets must be maintained for future generations.

Keeping Utah's bridges and pavement in good condition is the most effective way to extend the life of the transportation system. UDOT has a plan for every section of every road and bridge by:

- Applying well-timed preservation treatments
- Addressing critical needs first

Good Roads Cost Less

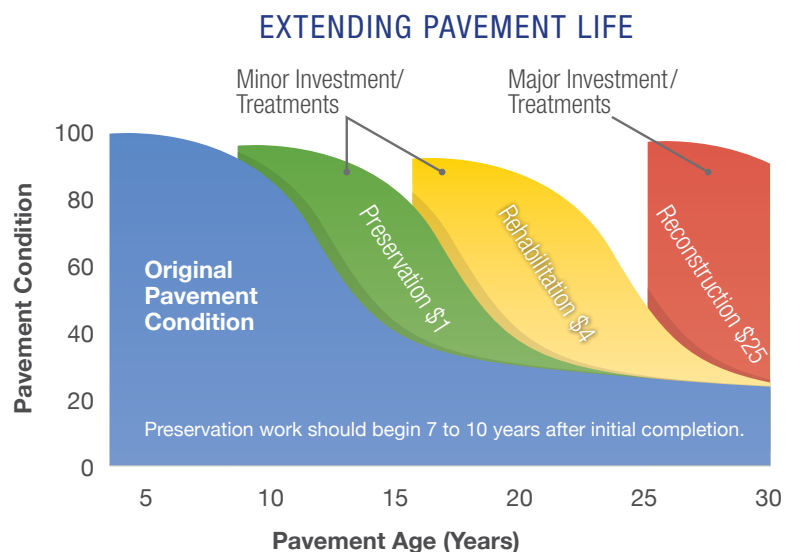
The most effective way to preserve the transportation system is to continue a regular schedule of upkeep to prevent deterioration.

Preserving our infrastructure includes actions such as:

- Sealing bridge decks, maintaining joints and bearings and painting steel girders.
- Repairing cracks and potholes and resurfacing asphalt or concrete pavement.
- Repairing or replacing drainage systems.



Crews improve drainage along I-80 in Parleys Canyon.



Once deterioration occurs, taxpayers will shoulder a much higher cost to repair or rebuild pavement and bridges.

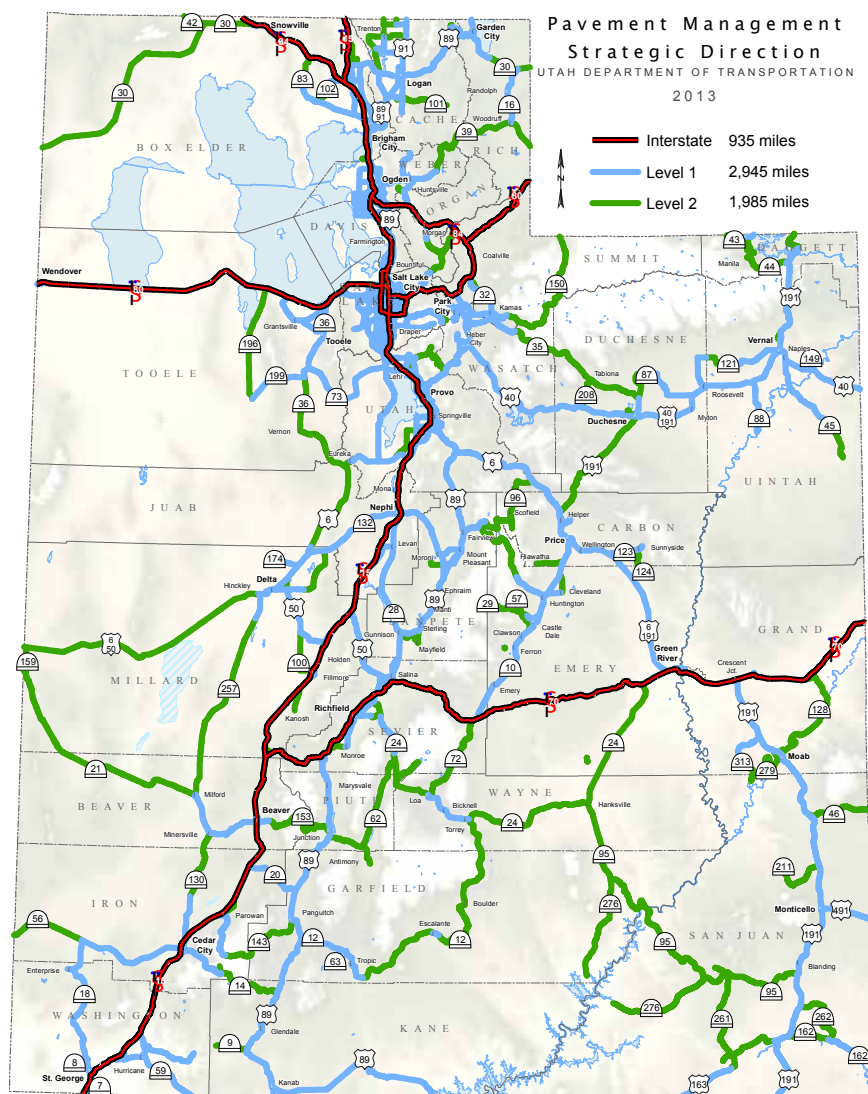
PAVEMENT MANAGEMENT

The Department manages and preserves approximately 16,000 lane miles across the state from multi-lane urban concrete interstates to rural two-lane asphalt roads. Approximately \$250 million is required annually to preserve this \$25 billion asset. The Department's pavement management philosophy is that good roads cost less, which means timely, cost-effective treatments minimize cost while achieving the greatest long term benefit.

Pavement Optimization – “A Plan for Every Section of Every Road”

The Department manages a total of 243 state highways. These highways are divided into 2,446 individual sections of varying length. Each individual section has its own history including when it was originally constructed, traffic volumes, type of facility (interstate, urban, rural), biannual distress surveys and when the next preservation is scheduled.

Pavement optimization, as opposed to a “worst-first” strategy, means the Department selects the treatment that provides the greatest benefit at the lowest cost. A program of specific projects is recommended based on the available budget.



Interstate

Centerline Miles ~ 935, 16%
Pavement Area ~ 8,000, 33%
VMT ~ 25,410,400, 53%
Combo Truck VMT
~ 3,432,600, 61%

Level 1

>1,000 vehicles or 200 trucks per day
Centerline Miles ~ 2,945, 50%
Pavement Area ~ 11,750, 48%
VMT ~ 21,538,200, 45%
Combo Truck VMT
~ 2,064,100, 37%

Level 2

<1,000 vehicles or 200 trucks per day
Centerline Miles ~ 1,985, 34%
Pavement Area ~ 4,800, 19%
VMT ~ 1,014,400, 2%
Combo Truck VMT
~ 133,500, 2%

Total

Centerline Miles ~ 5,865
Pavement Area ~ 24,550
VMT ~ 47,963,000
Combo Truck VMT
~ 5,630,200

Pavement Condition Forecasting

UDOT uses distress surveys and modeling techniques to forecast pavement conditions. Forecasting is conducted and reported by type of facility (e.g. interstate, urban, rural), material (e.g. concrete, asphalt), region and available budget.

Maintenance Management

An annual expenditure of \$250 million a year would be required to maintain the overall condition of the entire state highway system, providing the greatest benefit at the lowest cost. Funding has been limited to \$200 million per year during the past six years. UDOT created a tiered system for classifying highways in acknowledgment that funding levels were not adequate to maintain the entire system. The tiers are: interstates; Level 1 (average annual daily traffic (AADT) greater than 1,000 and truck volume greater than 200; and Level 2 (AADT) less than 1,000. Funding is sufficient to maintain interstate and Level 1 roads but not Level 2 roads.

Tiered Preservation

Creation of a tiered preservation strategy addressed the risk of trying to maintain all roads equally with limited funding, which would cause all highways to drop to a lower pavement standard. Discussion with stakeholders illuminated the need to preserve the highway system used by the greatest number and emphasized the tremendous initial and ongoing investments in the interstate and Level 1 and Level 2 roads.

Maintenance crews at individual maintenance stations are required to maintain Level 2 roads. Over the course of the past six years the department has continued with this tiered approach. Every year, UDOT has collected automated pavement distress conditions for all roads, and data revealed conditions for interstate, national highway system and Level 1 roads were not only maintained but steadily improved over initial targets. This led the Department to the conclusion that it could maintain a greater amount of pavement using the same level of funding allocated in previous years.

In 2013, after careful review, the Department recommended and the commission approved and lowered the threshold for Level 2 roads from 2,000 vehicles a day to 1,000 vehicles a day. The consequence was that about 785 miles were reclassified as Level 1 roads, which means they are now being actively maintained.

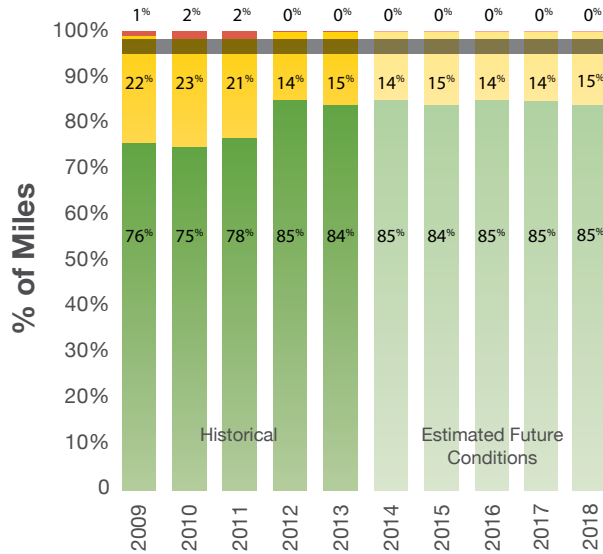


Crews place a microsurface on 31st street in Ogden.

Future conditions are based on current funding levels.

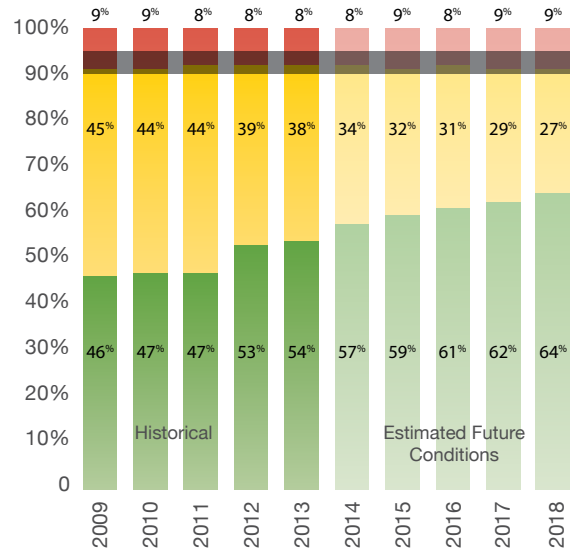
INTERSTATE SYSTEM (935 MILES)

Ride Quality—Forecasted with \$70 million NHPP*/yr



LEVEL 1 SYSTEM (GREATER THAN 1,000 AADT-2,945 MILES)

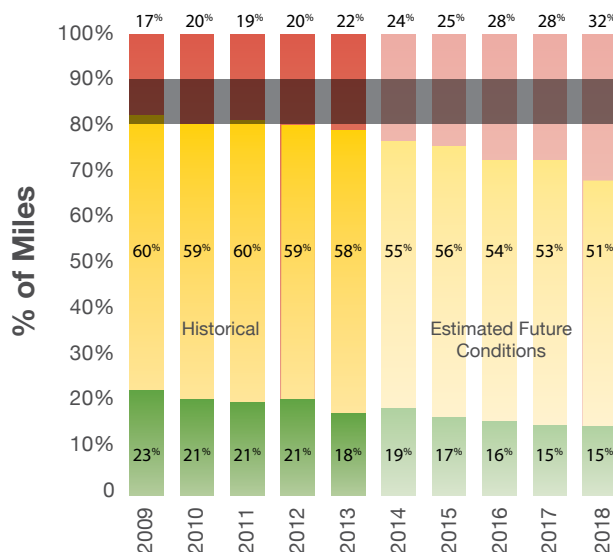
Ride Quality—Forecasted with \$106 million NHPP+STP/yr



For the Interstates and Level 1 the Department model continues to forecast an upward trend of the overall pavement condition based on current funding.

LEVEL 2 SYSTEM (LESS THAN 1,000 AADT-1,985 MILES)

Ride Quality—Forecasted with \$10 million Code 1/yr



■ % Good: IRI less than 95
■ % Fair
■ % Poor: IRI greater than 170
■ Target

*NHPP-National Highway Performance Program Funding
 2005 to 2012 condition based on measured .1 mile data
 2013 to 2018 condition based on modeled
 "section level" index

For Level 1 the Department model continues to forecast a relatively stable condition while Level 2 continues a downward trend of the overall pavement condition based on current funding.

2013 Accomplishments Include:

- 785 miles were changed from Level 2 to Level 1 roads, providing additional funding options.
- Completed all preservation and rehabilitation projects on time and within budget:
 - o 43 preservation projects totaling 343 miles valued at \$45,678,000 were completed.
 - o 30 rehabilitation projects totaling 163 miles valued at \$115,258,000 were completed.

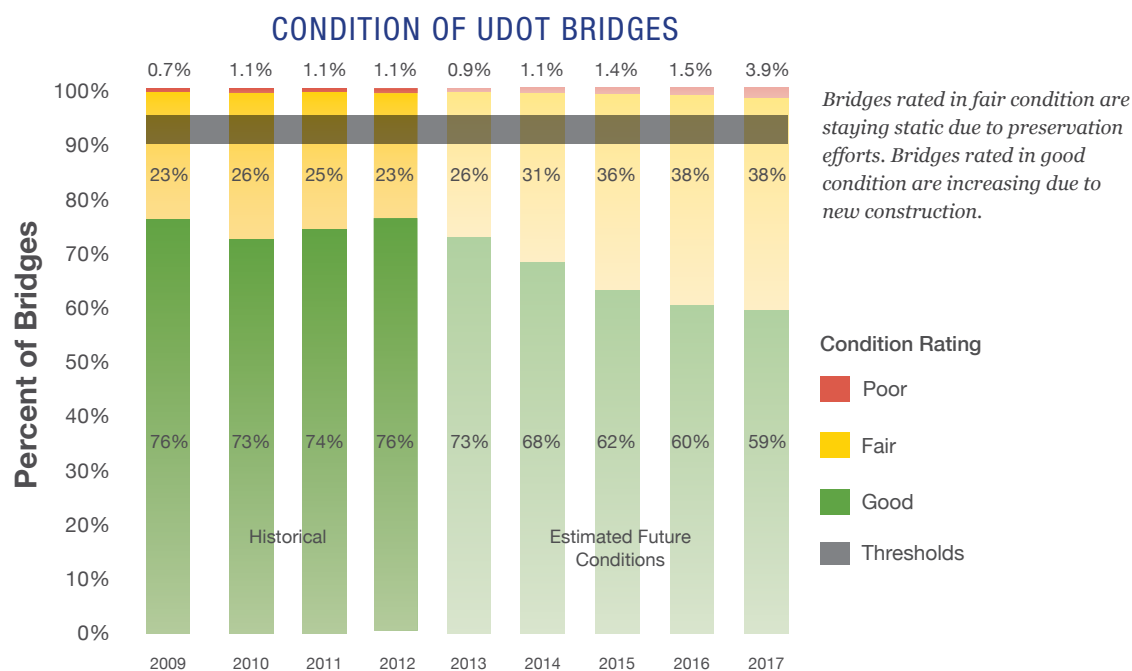
2014 Goals Include:

- Complete all preservation and rehabilitation projects on time and within budget:
 - o 30 preservation projects totaling 202 miles valued at \$57,441,823.
 - o 24 rehabilitation projects totaling 97 miles valued at \$108,682,717.

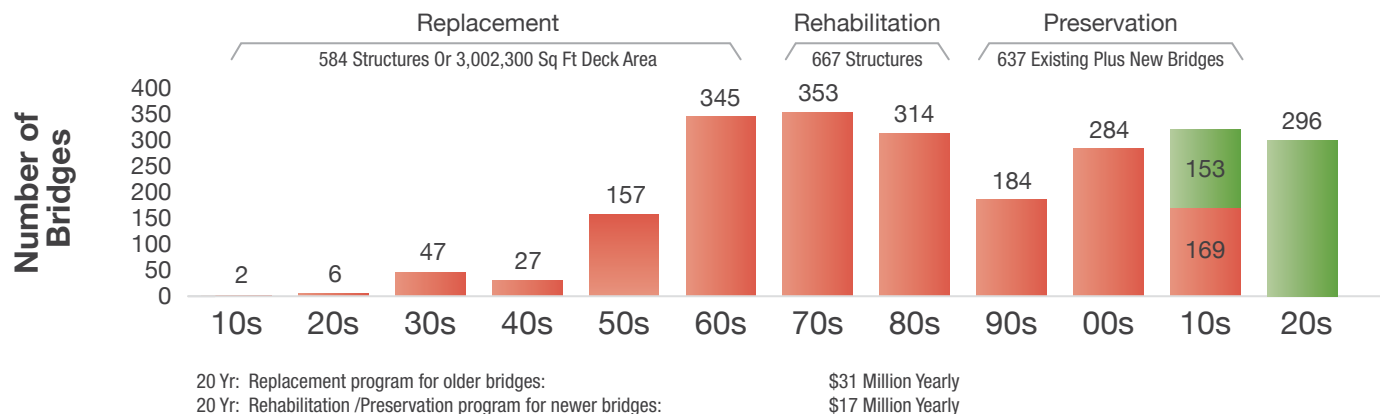
PRESERVING BRIDGES

UDOT maintains the state's bridges through rehabilitation, replacement and bridge preservation programs. Preservation activities, such as protecting bridge decks, extend the life of a bridge for a nominal cost. If preservation activities are not performed deterioration will be accelerated, the life expectancy will be reduced, and a costly rehabilitation or replacement will be needed at a sooner date.

UDOT inspects every bridge in the state that carries or crosses a public road and has a span of more than 20 ft. on a two-year cycle. The bridge elements are inspected for safety, condition and needed improvements. Based upon these inspections UDOT measures the health of the bridge system using condition ratings. The majority of UDOT bridges continue to have an overall rating of good, and the number of bridges rated poor continues to decrease.



AGE DISTRIBUTION OF UDOT BRIDGES



UDOT is seeing a boom in the number of 30 to 50 year old bridges coming due for replacement.

Although UDOT bridges are in an overall good condition, the infrastructure is aging. Currently 13 percent of state owned bridges have exceeded the original design life. The number of bridges exceeding design life will increase to 50 percent in the next 20 years unless older bridges are replaced. Over this period of time UDOT will need to replace 29 bridges per year to continue to maintain the bridge inventory in its current condition. In addition to the replacement and rehabilitation of these structures, UDOT will need to rehabilitate or perform preservation treatments on approximately 65 bridges per year, with each treatment lasting an average of 20 years.

2013 Accomplishments Include:

- 5 structurally deficient bridges, valued at \$11,700,000, were replaced.
- 3 new bridges, valued at \$2,240,000, were constructed on the Southern Parkway.
- 17 bridge rehabilitations and/or widenings, valued at \$12,090,000, were completed.
- 113 bridge preservation treatments, valued at \$15,670,000, were completed.
- The bridge condition has remained constant with an overall good rating.

2014 Goals Include:

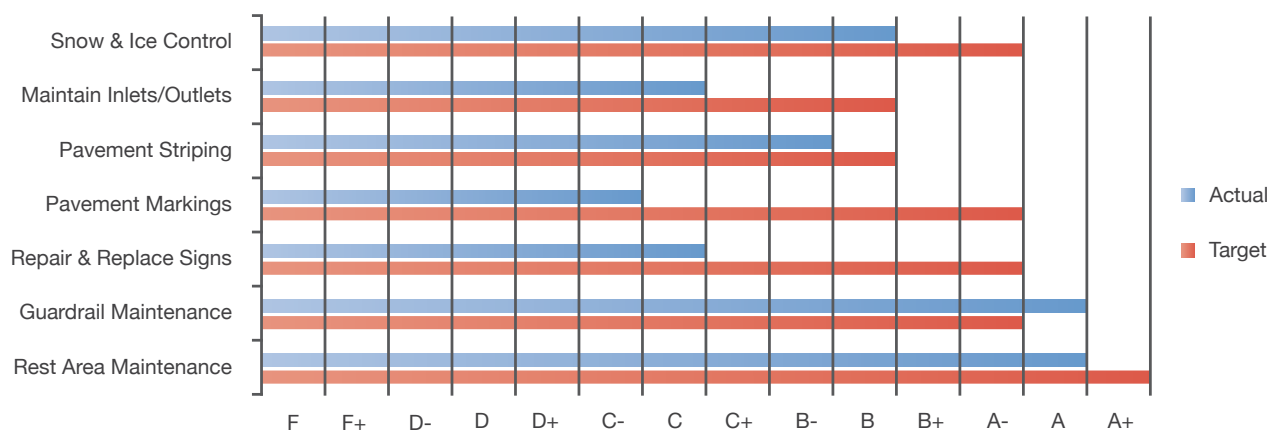
- Continue to address structurally deficient bridges.
- Continue to develop the Bridge Asset Management System to accurately project future bridge needs and funding to effectively manage the structure assets.
- Rehabilitate or replace 9 Structures valued at \$12,200,000.
- Preserve 27 structures valued at \$3,800,000.
- Continue to maintain a bridge system rated in good condition.

MAINTENANCE

MMQA Program:

The Central Maintenance Division's Maintenance Management Quality Assurance (MMQA) program is used to identify performance of 19 specific state highway assets. These assets range from pavement striping, litter, drainage features as well as operational performance items such as snow and ice removal. These measures help the UDOT Maintenance Division identify its respective performance based on the current funding levels provided.

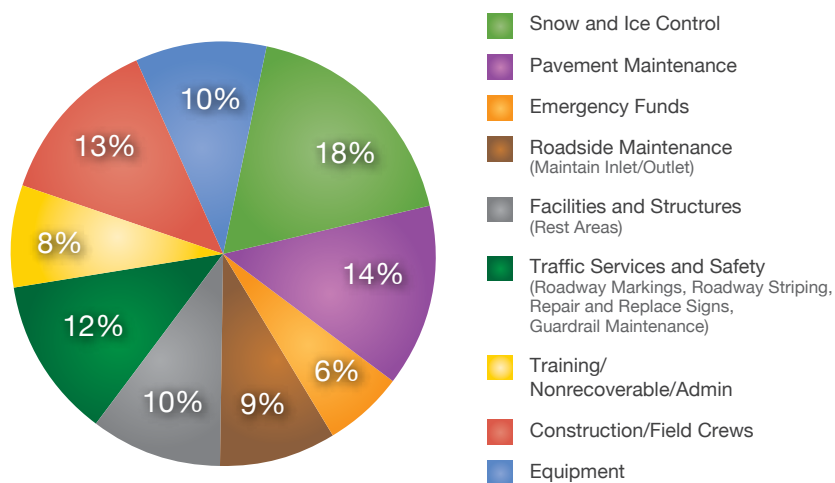
MMQA SELECT KEY MEASUREMENTS



Funding Distribution:

Each year the Central Maintenance Division distributes funding provided by the legislature based on MMQA performance levels for performance measured assets and past history for non-measured assets. This distribution is broken into nine groups which helps identify specific areas of funding. The fiscal year (FY) 2013 budget distribution for the maintenance operations statewide was \$130,639,100.

FY 2014 MAINTENANCE BUDGET DISTRIBUTION



2013 Accomplishments:

- 5,118 lane miles of chip seals, pothole patching and crack sealing.
- 221,270 gallons of lane striping, parking lot, traffic island and guideline paint.
- 31,811 miles of litter control.
- 26.2 miles of fence maintenance and repair.
- 19,667 feet of guardrail maintained.
- 19,692 feet of cable barrier maintained.

Strategic Goal

OPTIMIZE MOBILITY

UDOT continuously strives to make the transportation system work better while quickly and efficiently moving people to their destination through optimizing operations, improving connections to transit, biking and pedestrians and increasing capacity. Each year, new innovative projects are proposed, planned and constructed.

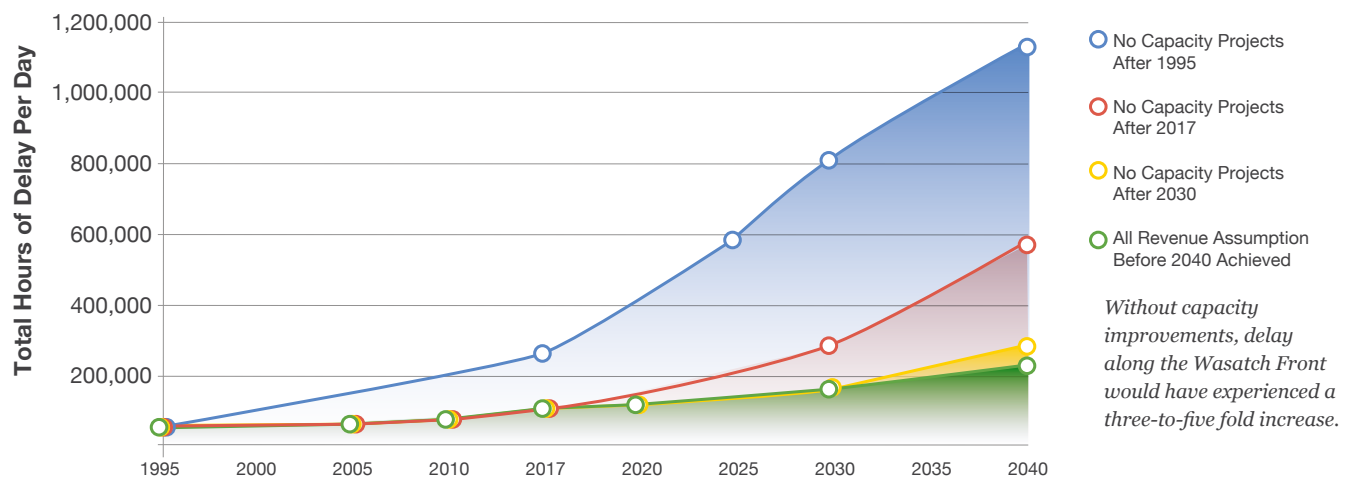
UDOT works to optimize traffic mobility through a number of measures which include:

- Focusing on integrated transportation
- Adding capacity
- Transportation solutions
- Providing traffic information
- Managed lanes
- Signal coordination

Planning for the Future

Traffic delay diminishes the quality of life for all who live and drive in Utah. Thanks to state funding, UDOT is currently holding back delay. Data from the Wasatch Front Regional Council (WFRC) shows current and projected delay with and without capacity improvements starting in 1995. Between 1995 and 2010, delay is shown to be at a standstill even with a 50 percent increase in population and VMT.

DELAY ALONG THE WASATCH FRONT - DAVIS, WEBER, SALT LAKE & UTAH COUNTIES



Even with planned capacity projects, delay will increase after 2013. Mobility projects have made a difference in delay, however continual focus on mobility will need to be maintained in order to continue this trend.

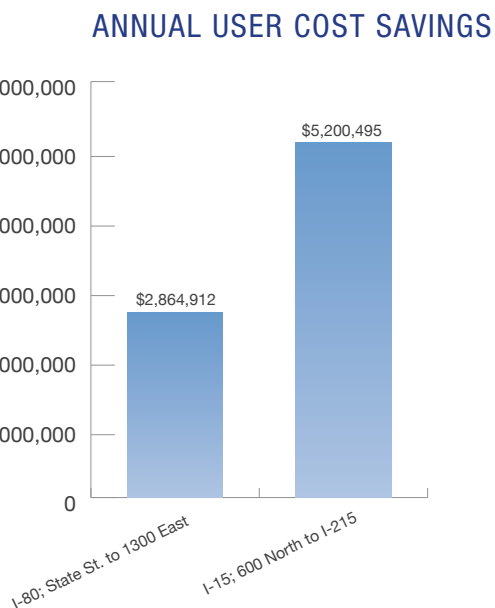
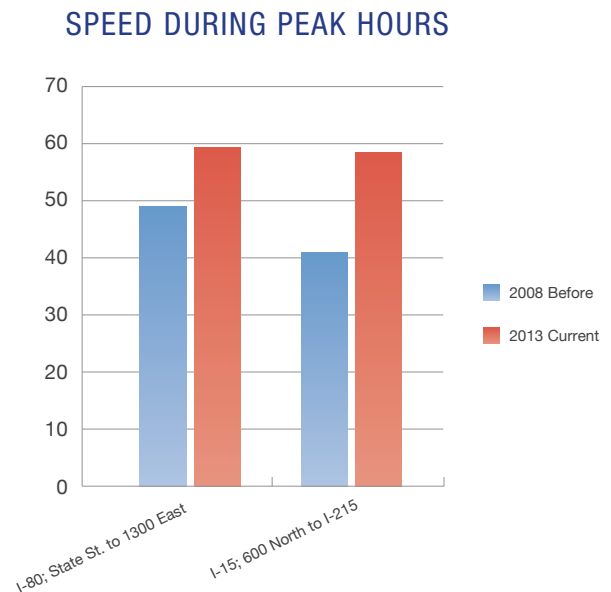
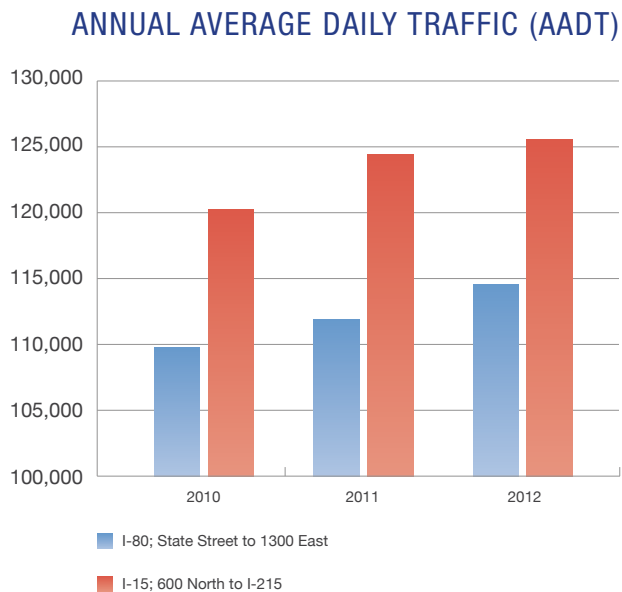
ADDING CAPACITY: LANE MILES AND FUNDING SOURCES

Since 2006, more than 888 lane miles have been added to the state system from various programs that fund more than 100 projects.

Transportation Investment Fund (TIF), 2005: Currently, capacity projects are funded through the TIF. Some of these projects include SR-26 (Riverdale Road) 1900 West to I-84, 1100 South Interchange on I-15 in Box Elder County, Bangerter Highway/Redwood Road Interchange, I-15 Spanish Fork to Payson Improvements and I-15 MP 8 Interchange Reconfiguration at St. George Blvd.

UDOT's Projects Relieve Congestion

Before and after studies on two capacity projects illustrate how UDOT eliminated hours of delay. User costs, a result of delays were also reduced.



MANAGED LANES

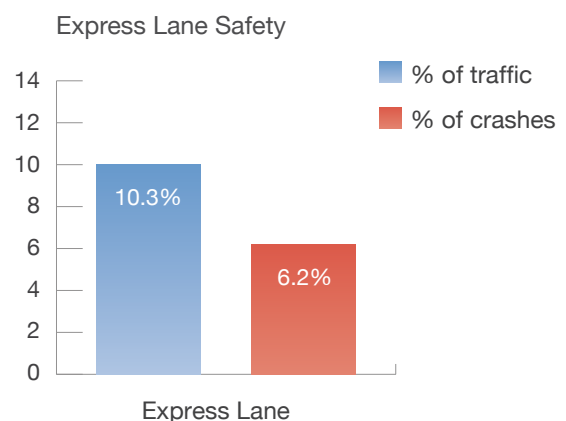
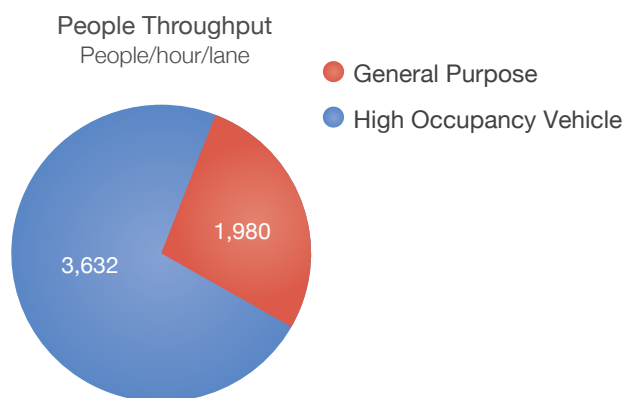
Innovative lane use helps move people more efficiently.



Express Lanes: UDOT currently has 124 miles of Express Lanes (62 miles both northbound and southbound) with 54 continuous miles between Spanish Fork and North Salt Lake City making Utah's Express Lanes the longest continuous Express Lanes in the country. A 10-mile gap between North Salt Lake and Kaysville is currently under construction. More than 14,700 Express Pass transponders have been purchased, speeds average **7 mph** faster than the general lanes and travelers experience a **higher level of safety**.

EXPRESS LANES VS. GENERAL PURPOSE LANES USAGE

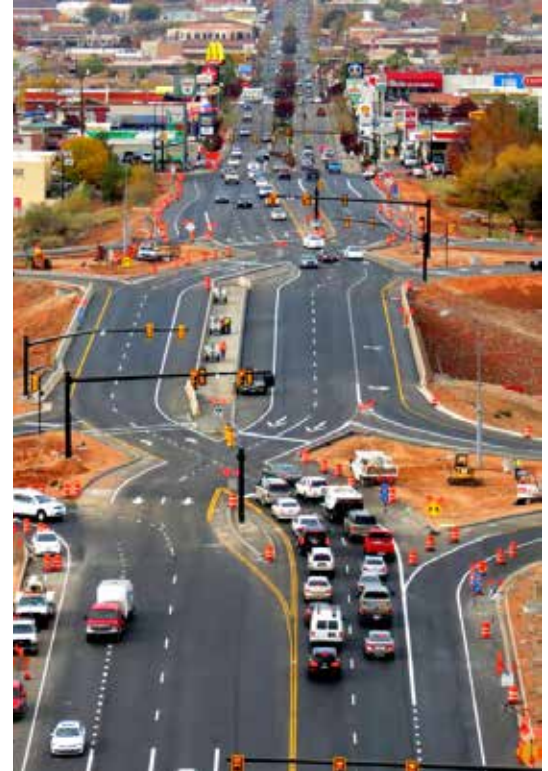
The high occupancy and Express Lanes move more people per hour per lane than the general purpose lane. They also account for 10.3 percent of the traffic on the roadway and 6.2 percent of the crashes.



INNOVATIVE TRANSPORTATION SOLUTIONS TO ADDRESS MOBILITY

Throughout the years, UDOT has employed the latest innovations to increase mobility on Utah roadways. Some of these innovations include:

- Flex Lanes at 5400 South accommodate heavy directional traffic by alternating the direction of the lanes during peak hours of the day, significantly decreasing traffic delay with a lesser construction cost and less community impact.
- Commuter Lanes on SR-92 provide a direct connection to and from I-15 and eliminate stopping at signals; reducing travel time.
- ThrU-Turn Intersections (TTI) on 5400 South and 12300 South, eliminate all left turns at the intersection, thus reducing delay at the intersection.
- Diverging Diamond Interchanges (DDI) can improve safety and mobility. Five DDIs have been built throughout the state.
- Continuous Flow Intersections (CFIs) improve traffic congestion by allowing vehicles to move more efficiently through the intersection with less delay. UDOT has built 11 CFI's.



St. George DDI

INTEGRATED TRANSPORTATION

UDOT recognizes the importance of an integrated transportation system, which includes bike lanes and paths, and access to buses and trains. UDOT partners with local communities and organizations to help them achieve their vision for the their community and has also committed to active transportation with a formal Active Transportation Policy. This policy will ensure that the needs of bicyclists, pedestrians, and other active transportation users will be routinely considered as an important aspect in the funding, planning, design, construction, operation and maintenance of UDOT transportation facilities.





Reducing Travel Demand with TravelWise

To help make our transportation system work better, UDOT developed TravelWise. The TravelWise program encourages alternatives to driving alone to help travelers conserve energy, reduce traffic congestion and improve air quality. TravelWise strategies include ridesharing, carsharing, carpooling, vanpooling, active transportation (biking, walking), telecommuting, skipping the trip, using transit, flexible work hours and compressed work weeks.

To better understand travel reduction efforts during red and yellow air quality days, the UDOT TravelWise program analyzed average traffic volumes along the Wasatch front during the 2012-2013 Winter. UDOT looked at interstate and principal arterial routes in Salt Lake, Davis, Weber and Utah Counties and compared traffic volumes on red/yellow air quality days, to traffic volumes on comparable green air quality days. On average, vehicle traffic on red/yellow air quality alert days was 3.9 percent lower than traffic on comparable green days.



TRAVELWise™
A UDOT Program



SIGNAL COORDINATION

The Traffic Operation Center (TOC):

The Traffic Operations Center is the nerve center of UDOT. Using advanced technologies such as cameras and traffic/weather sensors, operators in the TOC can monitor traffic, detect problems and take actions necessary to return traffic flow to normal. The TOC continues to be the key to providing a cost-effective and an efficient solution to help relieve congestion on Utah's roads and highways.

UDOT is committed to making our signal operations world class. We are responsible for all traffic signal timing on all state roads, which we control centrally at the TOC. UDOT is among the first in the country to use real-time traffic signal performance metrics in optimizing traffic signal coordination, and is leading the nation in this endeavor. This new approach allows UDOT to do more with less and to manage traffic more effectively 24/7. For example, at several intersections, we know in real-time if vehicles are arriving on green or red, and what percent arrives on green. We are then able to make remote adjustments to the traffic signal for better, optimal operational efficiencies. We are also able to get other metrics in real-time, such as the approach speeds of vehicles approaching the intersection, approach volumes, lane-by-lane volume counts, vehicle delay measurements and vehicle detector health.

For example, using the new signal performance metrics (<http://udottraffic.utah.gov/signalperformancemetrics>), UDOT improved the signal operations along Foothill Drive from Thunderbird to Mario Capecchi Drive. This corridor is 3.5 miles long and has nine signalized intersections.



PROVIDING TRAFFIC INFORMATION

UDOT uses a variety of methods to provide actual travel times and accurate traffic and weather information to help drivers make choices that reduce delay, prevent crashes and improve air quality. By implementing an extensive Intelligent Transportation System (ITS), UDOT is able to know what is happening on Utah roads and provide travelers the information they need to plan their routes. UDOT's diverse traveler information toolbox allows a variety of users access to information that can help to plan trips. UDOT communicates travel information online at udottraffic.utah.gov and through:

Variable Message Signs (VMS): UDOT has 162 VMS located on Utah Interstates and State Highways, telling travelers of expected travel times, upcoming construction, lane closures, crashes blocking their route or information ahead of a large weather event. UDOT also uses the VMS for a limited number of public safety campaigns including seat belt awareness, air quality initiatives and drunk driving enforcement.



UDOT Traffic Cameras: Located throughout the state, UDOT traffic cameras provide real-time traffic views of current road conditions. These cameras help operators at the TOC know what's happening on the roads, are used by news stations to report traffic conditions and are readily available to the public at udottraffic.utah.gov. The cameras are also available on a UDOT Traffic media web portal.



UDOT has more than 950 cameras in operation throughout the state.

Social Media: UDOT uses Twitter, Facebook and YouTube to post information and updates on traffic conditions, changes in traffic flow, construction activities and weather conditions, as well as educational materials such as animations and tutorials.

UDOT Traffic App: This app provides mobile access to information about traffic conditions, accidents, road construction activities, seasonal road closures, traffic cameras and VMS messages. The UDOT Traffic app has a push-alert feature called the TravelWise Alert, to inform the traveling public of a major traffic issue. The UDOT Traffic app has more than 190,000 downloads.



UDOT Traffic Website:

For travelers without an iPhone or Android device, the UDOT Traffic Website allows one to instantly check the latest traffic and road conditions, weather conditions, emergency alerts and mountain pass conditions at udottraffic.utah.gov.

511 Traveler Information Phone Line:

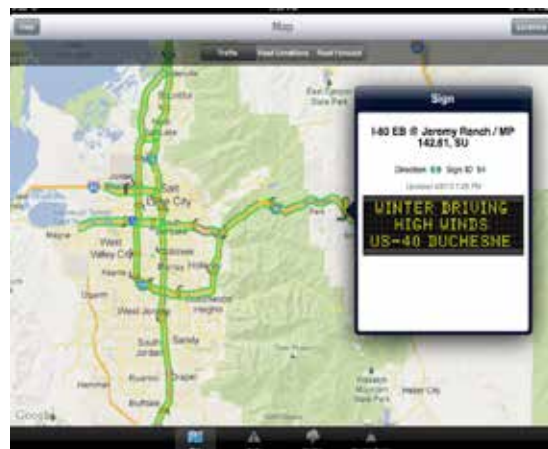
The 511 Traveler Information system is a nationwide resource for road information. UDOT's 511 phone line is a popular resource for truck drivers and has information on traffic and road conditions, transit options, road/weather information and more. The 511 phone line is an important way that UDOT reaches out to travelers, as it can be accessed from any mobile phone or land line in areas of the state without cell coverage. In October of 2013, UDOT used the 511 system to broadcast important information about National and State Park availability. The 511 system is also important during statewide emergencies such as wild fires and for AMBER Alert broadcasts.

Highway Advisory Radio (HAR):

UDOT's network of Highway Advisory Radios are useful in broadcasting information in a targeted area. The HAR is accessible by an AM radio station and the signal can be heard up to 5 miles from the HAR broadcast location. HAR are valuable resources for Big and Little Cottonwood Canyon areas where there are periodic closures for avalanche control work.

UDOT's Citizen Reporter Program:

The UDOT Citizen Reporter program enlists trained volunteers to report on road and weather conditions on Interstate and State highway routes throughout the state. The data provided by volunteers helps UDOT meteorologists fill in gaps where Road Weather Information System (RWIS) information is not currently available. The Citizen Reporter Program information helps keep road condition information more current and useful to travelers.



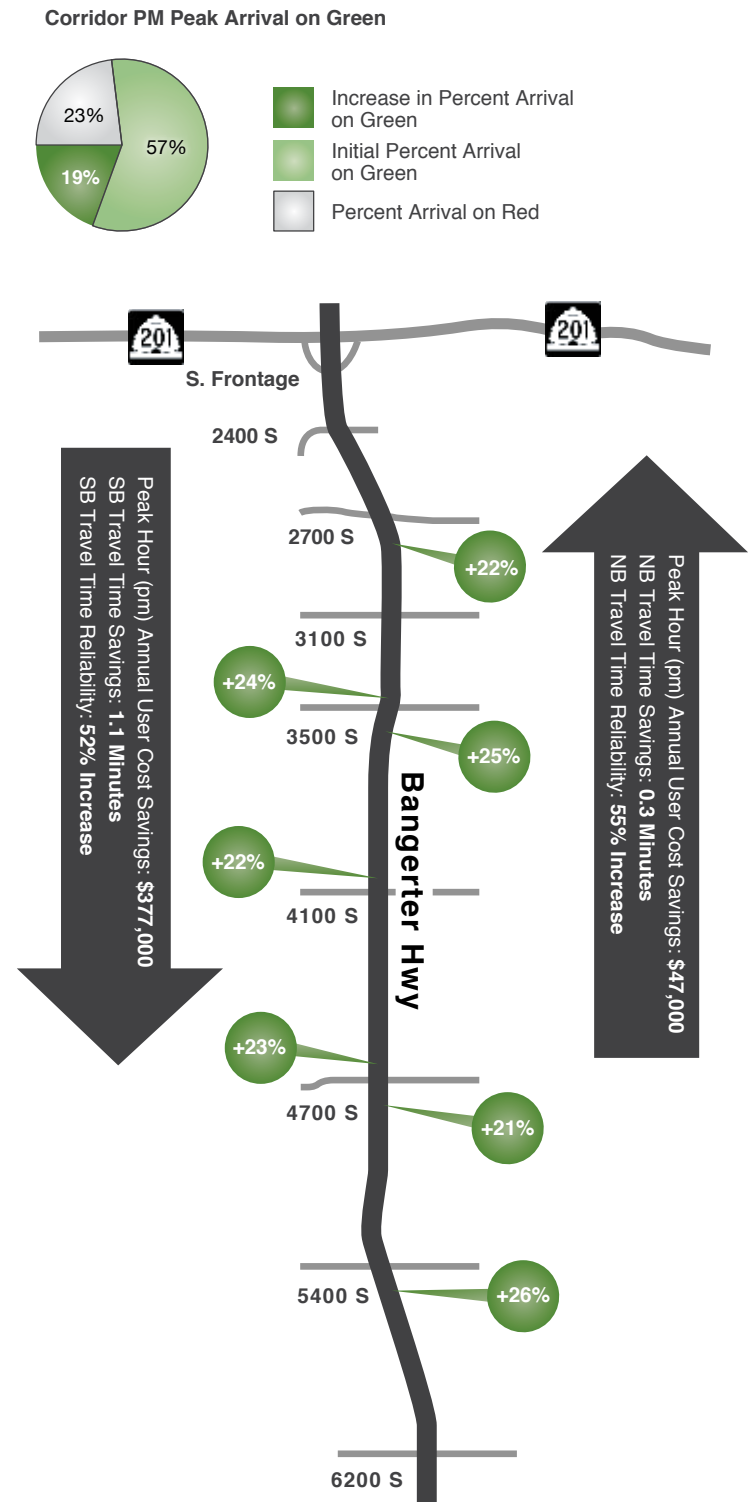
2013 Accomplishments:

- Implemented real-time performance measurement for traffic signal operations. Performance measurement is functional at 730 of UDOT's 1,150 traffic signals statewide (63%).
- Optimized signals along 10 corridors in Regions 1, 2, 3 and 4.
- Standardized the new traffic signal preventative maintenance program and met the schedule for Year 1.
- Created and implemented the Travelwise Alert function on the UDOT Traffic website and mobile app, including push notifications on the mobile app.
- Developed and implemented an innovative approach to monitoring rainfall over recent burn scars above state roads. Provided advanced warning for every 2013 flooding event on SR-31 due to the 2012 Seeley Fire.

2014 Performance Goals:

- Improve the quality of rural road-weather information provided to the public by implementing the new Citizen Reporter Program statewide. Recruit at least 200 citizen reporters.
- Use real-time performance measurement to identify priority corridors in need of timing improvements. Generate daily reports to establish priorities.
- Implement improved signal timing at the highest priority locations and document the results with before and after studies using real-time performance measures.

BANGERTER HWY BETWEEN SR-201 AND 6200 S— PM PEAK CHANGES TO ARRIVAL ON GREEN BEFORE AND AFTER COORDINATION IN MARCH 2013



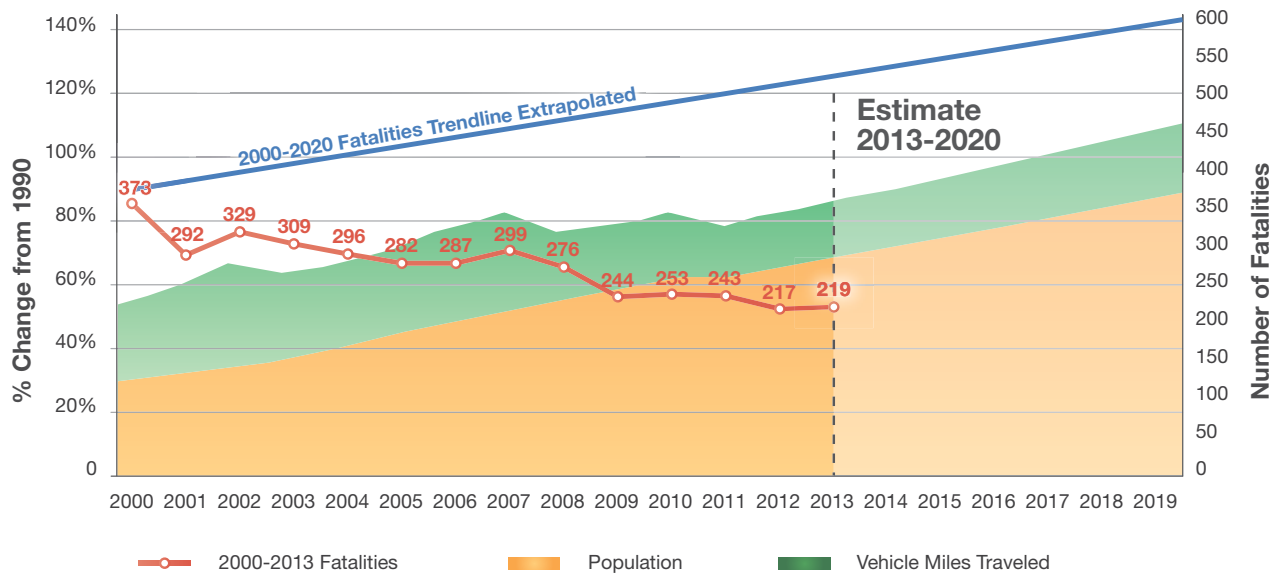
**Performance measures are for the corridor and not the side streets.*

Strategic Goal ZERO FATALITIES

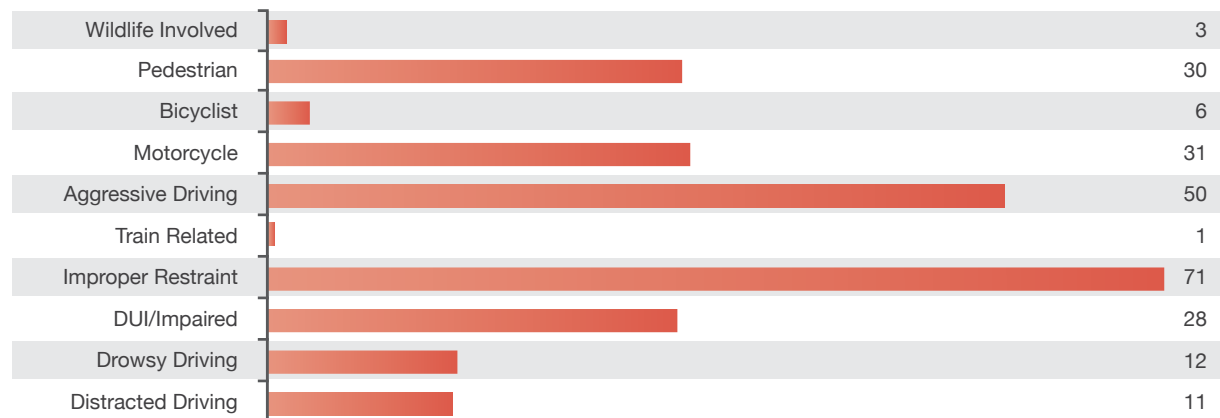
UDOT remains committed to safety. Zero fatalities is the only goal.

Every UDOT project incorporates safety improvements. In 2013, UDOT programmed \$29 million for specific safety projects.

REDUCING HIGHWAY FATALITIES TO ZERO



FATALITIES TYPE *(a fatality may appear in multiple categories)*



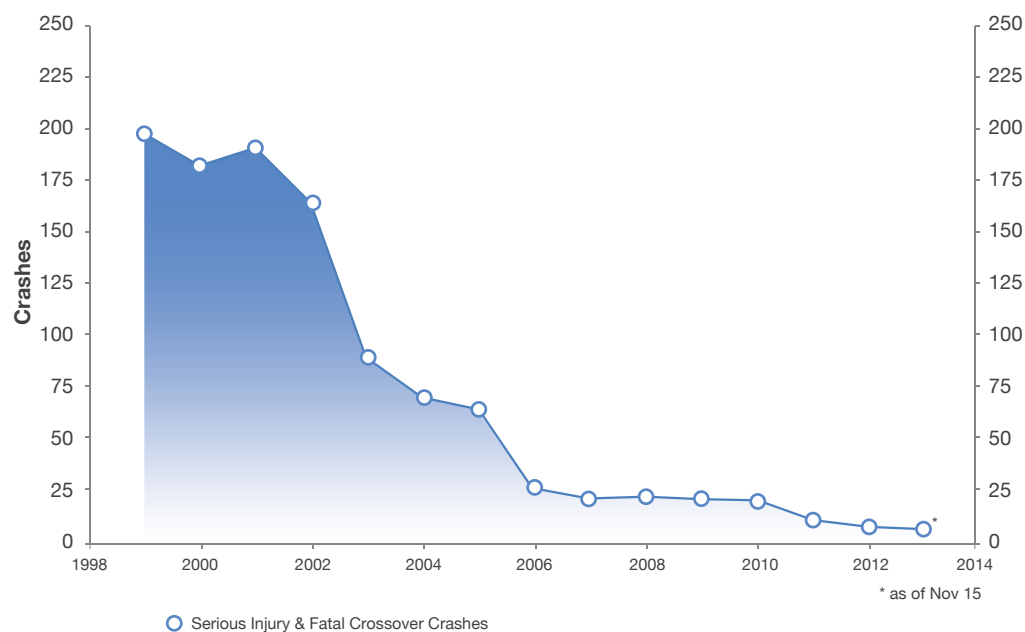
* As of January 21, 2014—Preliminary

Every year the number one cause of fatalities during a crash is improper restraint, far beyond any other cause. Excluding pedestrian, bicyclist and motorcyclist fatalities, the number of people that died because they weren't wearing a seat belt represents over half of Utah's roadway fatalities. According to the National Highway Traffic Safety Administration (NHTSA) about half of those lives — 39 people — could have been saved if a seat belt had been used.

ENGINEERING

UDOT's focus on safety within engineering begins with planning, designing and building safe roadways. Engineering for safety is UDOT's commitment to a safe-system approach. The main principle of a safe-system approach is the roadway is designed and built to realistically prevent traffic related deaths even when driving behaviors create crashes. UDOT engineers use design principles that have been proven to be safe and reliable. Design and construction standards are used for roadway geometry, signs, traffic markings and safety devices to provide consistency for traveling public. However, UDOT engineers continue to search for new and innovative ways to make transportation safer.

INTERSTATE SERIOUS INJURY AND FATAL CRASHES INVOLVING A VEHICLE THAT CROSSED THE MEDIAN



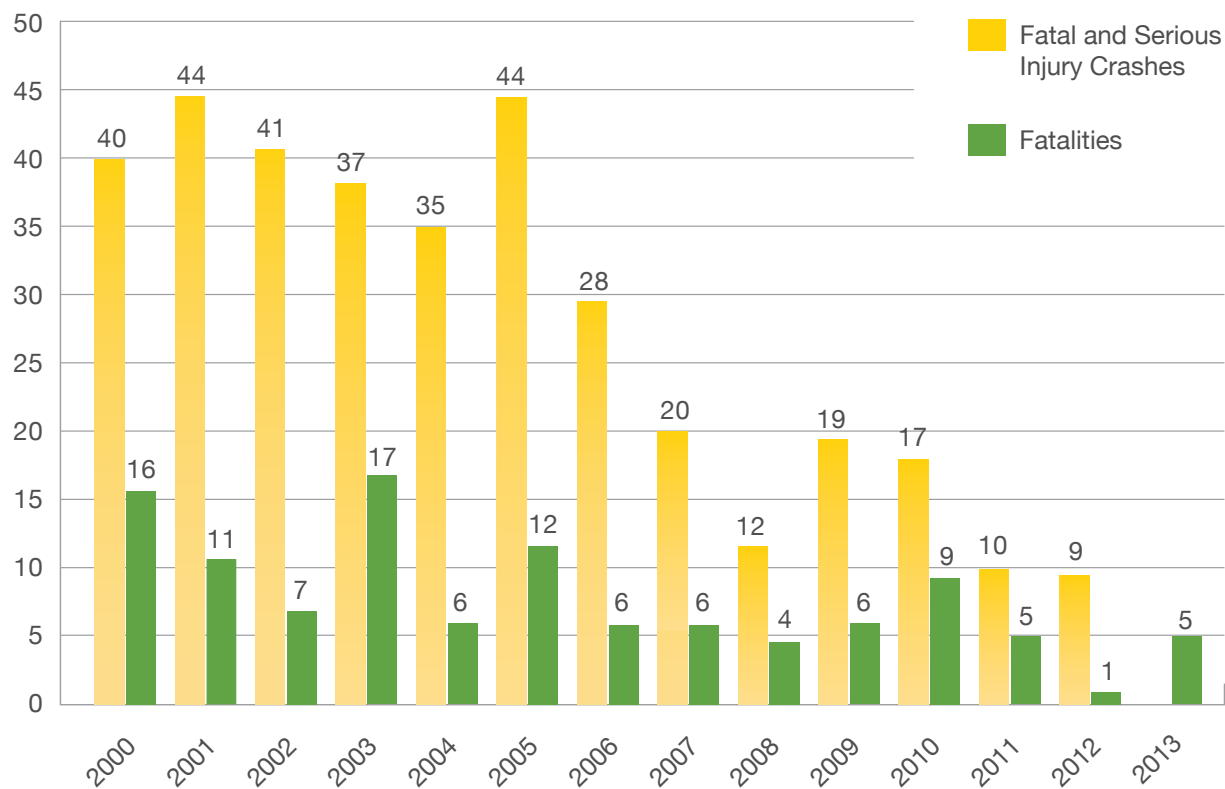
Since 1999, the number of serious injuries and fatal crashes on Utah roads, caused by vehicles crossing the median, has decreased by more than 180 incidents per year. The installation of safety features such as cable barriers, solid barriers and rumble strips are helping to reduce this number.

Safety Improvements on US-6

Crashes have decreased dramatically on US-6 in the last few years with the following safety projects:

- Enhanced signing
- Dynamic Curve Warning Signs
- Centerline and shoulder rumble strips
- Passing lanes

US-6 CRASH STATISTICS US-89 TO I-70



Key UDOT Traffic Safety Programs include:

- **Highway Safety Improvement Program (HSIP)**
This federally funded program of safety improvement projects, activities and plans are carried out as part of the Utah Strategic Highway Safety Plan and is focused on improving highway safety on all public roads.
- **Spot Safety Improvement Program (SSIP)**
This state funded program of infrastructure safety projects is focused on addressing highway safety issues in a small localized area on state roadways.
- **Signal Program**
This state funded program provides for the design and construction of traffic signals where traffic engineering studies of existing conditions have warranted the use of signal devices for safe and efficient movement of traffic through an intersection.
- **Railroad Safety Program**
This federally funded program is focused on reducing crashes associated with the crossings of railroad facilities and roadways by providing or enhancing the traffic control devices or improving the interaction of vehicles and trains at these crossings.
- **Traffic Signal Program**
This program includes a number of safety features such as advance radar detection on high speed corridors which detects vehicle speeds and can extend a green light if a speeding vehicle is approaching. Real-time performance measures allow UDOT to identify problems with signal timing and equipment, minimizing congestion and stops.



Crews place girders on SR-193 for new bridge over railroad tracks providing positive separation between vehicles and trains.

EDUCATION

Utah demonstrates its commitment to safety through outreach efforts that help educate the public and make Utah a safe place for living, traveling and doing business. Much of UDOT's focus is on educating teens and children. Since 2009, UDOT safety programs have:

- Performed SNAP Walk n' Roll assemblies at 21 schools with approximately 11,957 students in attendance.
- Totalled more than 135 presentations to elementary schools.
- Reached more than 100,000 students statewide.
- 160 schools participated in Walk More in Four with 4,438 students completing entry forms.

Zero Fatalities (ut.zerofatalities.com):

- As a member of the Utah Safety Leadership Committee, UDOT is taking a comprehensive, coordinated approach to improving traffic safety.
- With the combined efforts of several traffic safety partners, last year Utah saw the lowest number of traffic fatalities since 1958.
- Independent surveys show that more than 73 percent of adults in Utah are aware of the Zero Fatalities program. More than half (56 percent) of those who are aware of Zero Fatalities say the program has influenced them to avoid the top behaviors killing people on the roads.
- If we exclude pedestrian, bicyclist and motorcycle fatalities, the number of people that died because they weren't wearing a seat belt represents more than half (53.7 percent) of all Utah's roadway fatalities.
- UDOT has partnered with KSL for one year to bring stories about how Utahns can stay safe on Utah's roads in an initiative named: KSL's Road to Zero Fatalities.

Don't Drive Stupid (dontdrivestupid.com):

- Don't Drive Stupid is Utah's teen driving safety program and has created partnerships throughout the state with more than a dozen organizations.
- Nearly 20,000 people were reached through Don't Drive Stupid presentations and outreach programs last year.
- Don't Drive Stupid representatives are helping parents prepare their teens for driving. Driver education instructors ask Don't Drive Stupid representatives to speak to parents and teens about the top behaviors killing people on Utah's roads, the graduated driver license laws and other safe driving messages.

Student Neighborhood Access Program (SNAP):

- A fun and comprehensive program for walking and biking safely to school that engages and educates students, parents, school administrators, crossing guards and communities.
- As part of the federal Safe Routes to Schools program administered by UDOT, SNAP's first priority is student safety, with the goal to help make the roads around schools safer.



EMERGENCY SERVICES

Incident Management Program:

UDOT's Incident Management Program began in 1994 as part of UDOT's on-going commitment to safety on Utah's roads. From the beginning, the program has provided significant benefits by increasing first responder safety, reducing congestion and delays and reducing secondary crashes.

Disabled vehicles create a safety hazard, especially when the disabled vehicle is blocking a travel lane. Statistics show that for every five minutes that a travel lane is blocked on the freeway, congestion develops behind the crash that will take 25 minutes to clear. Also, every minute a lane is blocked the likelihood of secondary crashes resulting from congestion increases by three percent. Approximately 20 percent of freeway crashes trace back to an original incident.

With these kinds of statistics, the Incident Management program is intended to improve freeway safety and reduce congestion by keeping the lanes of travel clear. A stationary vehicle on the freeway, whether abandoned, crashed or otherwise disabled, creates the potential for a collision and, as such, poses an immediate threat to public safety.

"The Incident Management Program has been an indispensable program for the State of Utah. Not only has it expedited much needed services for stranded motorists, it has provided a safety net for all highway users in the state. The IMT units have facilitated traffic flow by getting motorists on their way, providing early warnings for crashes, reduced secondary crashes and made it possible for troopers to have more time for patrol activities. Additionally, with the introduction of several lifts attached to the trucks, they have been successful in removing disabled vehicles and minor crashes to safer locations. It is almost impossible to quantify the absolute value this program provides in terms of safety for everyone involved." – Major Mike Kuehn, Utah Highway Patrol

CONTROLLING SNOW AND ICE

UDOT is dedicated to safety on its roads. In order to keep roads safe during snow storms UDOT clears snow from approximately 6,000 centerline miles of Utah's roads, UDOT employs the latest technologies and trains crews to ensure they are ready.

- On average, Utah receives more than 25 winter storms each year and UDOT crews remove more than 65 million tons of snow and ice from Utah's roads.
- To help keep our roads clear around the clock, UDOT operates a fleet of approximately 500 snowplows.
- UDOT's winter operations budget for the 2013-2014 winter season is \$23.3 to 28.35 million, including equipment, salaries, sand, salt, brine and avalanche control.



Crews clear the snow on SR-14 in Cedar City mountain.



Crews clear the snow on Monte Cristo in Northern Utah.

UDOT continues to make the snow and ice removal process more efficient by:

- Using equipment such as wing plows and tow plows that allow greater control and efficiency.
- Applying brine before storms and using salt more efficiently.
- Using technology such as Road Weather Information Systems (RWIS) and weather forecasting information to assess conditions and dispatch plows advantageously.
- Evaluating road conditions within one hour of every storm event.
- Saving more than 20,000 gallons of diesel fuel per year by training drivers using a snowplow simulator.
- Prewetting the salt starts the melting process immediately, which saves the department 18,000 tons of salt annually.

2013 Accomplishments:

- Programmed approximately \$29 million on 30 safety program projects for 2013 and \$33 million on 52 projects for 2014.
- Completed eight Safe Routes to School infrastructure projects.
- 461 (60%) of schools completed SNAP maps using UDOT provided software.
- Nine new traffic signals constructed.
- 52 traffic signal upgrades constructed.
- 19 pedestrian/school crossing improvements.

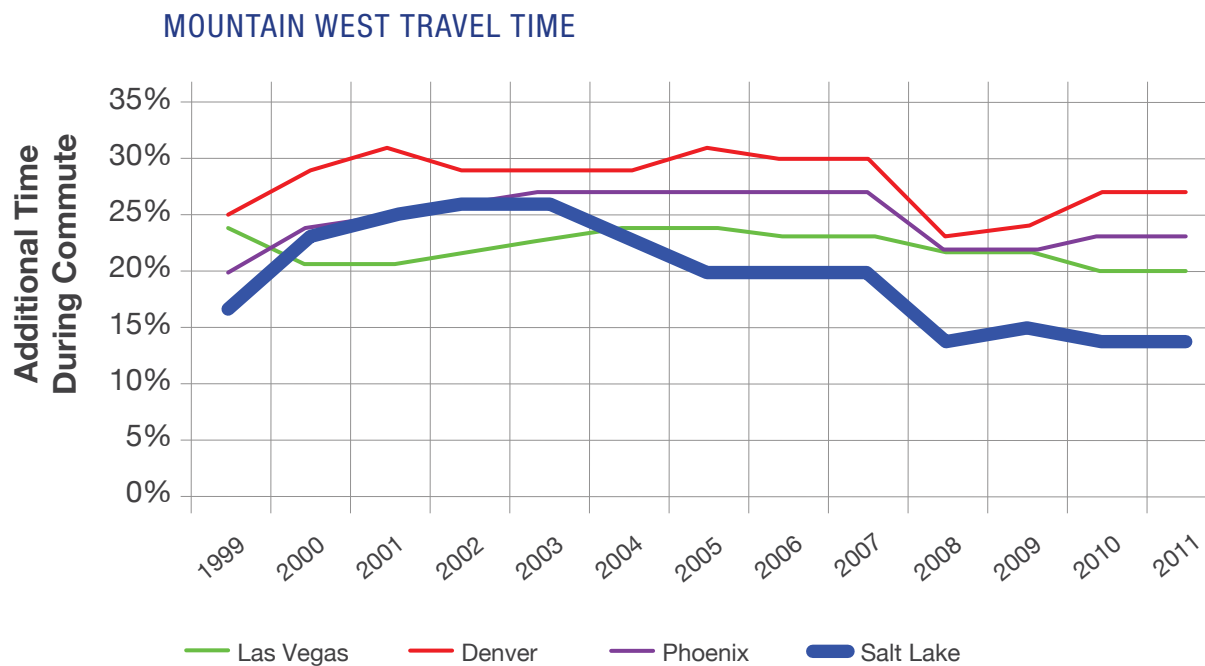
2014 Goal:

- Zero Fatalities
- 100% seat belt usage

Strategic Goal

STRENGTHEN THE ECONOMY

This goal recognizes UDOT's role in creating and managing a transportation system that enables economic growth and empowers prosperity. Investing in major roadway projects in the past few years has paid great dividends. While many cities in the United States show increasing travel times, Utah travel times are decreasing. This is very significant considering the population of Utah has grown 68 percent since 1990.



While many of the cities in the Mountain West are becoming more congested, Salt Lake City is seeing lower travel times because of the many transportation projects built in the past few years.

UDOT is providing a product for future generations. According to the Utah Transportation Coalition, “investing in Utah’s transportation system will result in nearly 183,000 new jobs in Utah’s economy in 2040 in comparison to a 2040 in which no investment is made in the transportation system. These jobs include not only nearly 55,000 construction jobs, but also over 91,000 jobs created by private savings on congestion, safety, wear and tear from deteriorating pavements and other transportation efficiency problems; over 17,000 jobs created by enhanced access to markets for Utah firms; and more than 19,000 jobs created by new businesses attracted to Utah because of improved transportation conditions resulting from Utah’s Unified Plan.”

Success in the first three goals creates a solid foundation for economic growth:

- Preserve Infrastructure
- Optimize Mobility
- Zero Fatalities
- **Strengthen the Economy**

PRESERVING INFRASTRUCTURE CAN BENEFIT THE ECONOMY IN A NUMBER OF WAYS

- **Costs Less:** Well preserved assets optimize limited public dollars. They also have a lower life cycle cost and decrease the financial liability on the state.
- **More Efficient:** A well maintained road is comfortable for motorists and provides easy access to businesses and employment. Deteriorated roads are difficult on vehicles and may cause motorists to seek other routes, thus causing congestion on a few major roadways that are in better condition.
- **Less Delay:** Major road repairs cause traffic and delays while periodic maintenance is less invasive and causes minimal traffic for motorists.



Crews repaved SR-88 in the Uinta Basin.

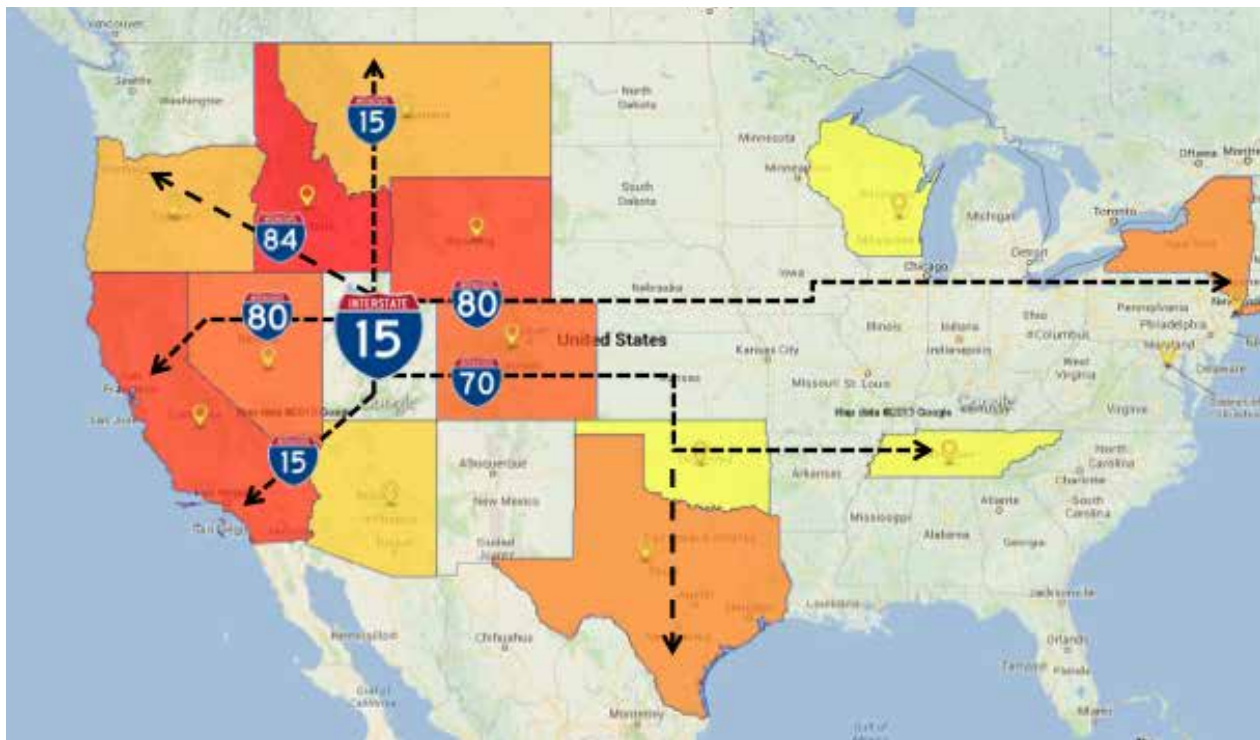
HOW OPTIMIZING MOBILITY STRENGTHENS THE ECONOMY

Mobility is Good for Business

UDOT understands the importance of mobility and its significance for economic growth. Businesses also understand the importance of locating in areas where their product can be distributed quickly and efficiently, and where their employees can benefit from a healthy quality of life.

One industry in Utah that understands the importance of a well maintained and efficient road system is the trucking industry. Currently, 1.3 million jobs in Utah are supported by truck-based trade and \$130 billion in goods are transported over Utah roads each year.

TRUCKING MAP

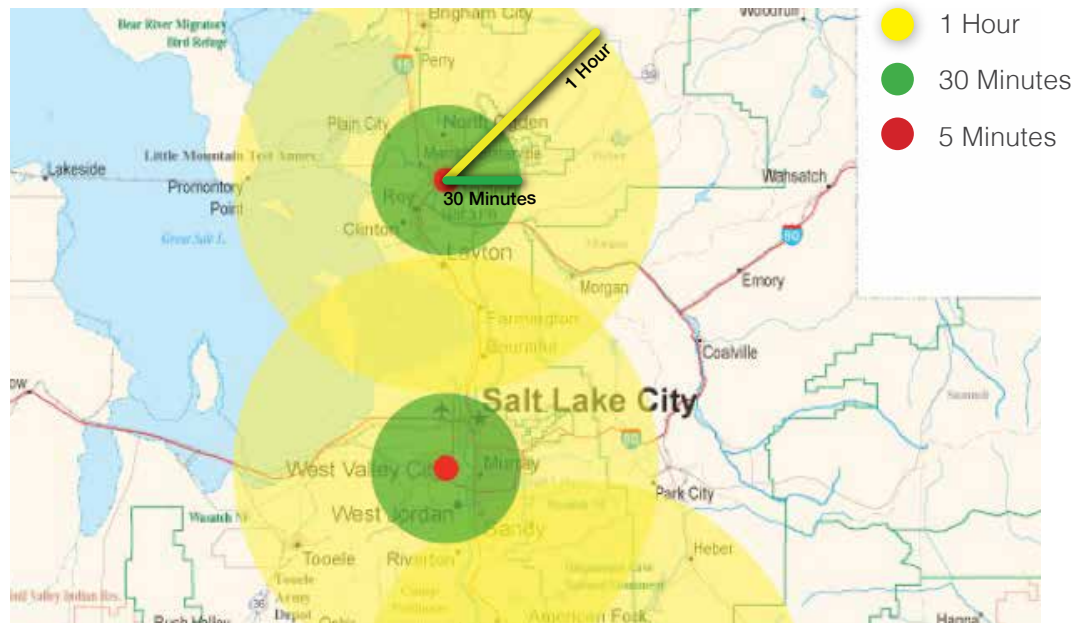


The ability of Utah's businesses to access markets in other states as well as inputs to production relies heavily on the efficiency and reliability of the transportation system for both people and goods. Without a seaport, our highways are Utah's lifeblood for trade.

(Source: Economic Development Research Group, "Economic Benefits and Impacts of Utah's Unified Plan." 2013.)

"Infrastructure is incredibly important to most companies when considering where to develop and expand. Manufacturers and distribution businesses need to be close to main thoroughfares to easily transport their products in and out of the region quickly." – Lane Beattie, President and CEO, Salt Lake Chamber.

MOUNTAIN WEST TRAVEL TIME



With less congestion businesses are better able to reach a wider range of customers and employee base.



State Route 92 Corridor

Over the past decade, the northeastern edge of Utah County from Lehi to Alpine has seen tremendous growth. Not only have numerous residents found favor with the cities in this area but major employers have chosen this area to locate national and regional offices and commercial parks here.

In the past few years major improvements have been made to SR-92 between I-15 and SR-74 in Alpine. These improvements include: more lanes of roadway, a smoother ride, commuter lanes and better access to surrounding businesses. Since 2007, approximately 100 new businesses and more than 4,135 new jobs have been created along this corridor.

HOW ZERO FATALITIES STRENGTHENS THE ECONOMY

Everyone benefits from a safe transportation system, including the economy.

- When a roadway is known to be safe, residents and visitors will be more likely to use it. Safe roads can promote the growth of business along that roadway and the local economy.
- Residents and visitors traveling on Utah roads expect to get to their destinations without harm or accident.
- Utah has one of the lowest fatalities due to motor vehicle accidents, with only .80 fatalities per 100 million vehicle miles traveled. This low fatality rate may be a factor in Utah's low automobile insurance rates, ranging from 16 percent to 18 percent less than the national average.

For the third year in a row, *Forbes* magazine has named Utah as the best state in the U.S. for doing business. According to economists, transportation plays a big role in the state's business environment. At the end of 2011 only six states — North Dakota, Wyoming, Alaska, Utah, Texas and Montana—showed more than eight percent job growth over the past decade. UDOT has worked with many companies throughout Utah to determine what their transportation needs are and how UDOT can assist in those needs. Certainly, businesses in Utah are benefitting from the improved mobility on roadways.

DELIVERING RESULTS

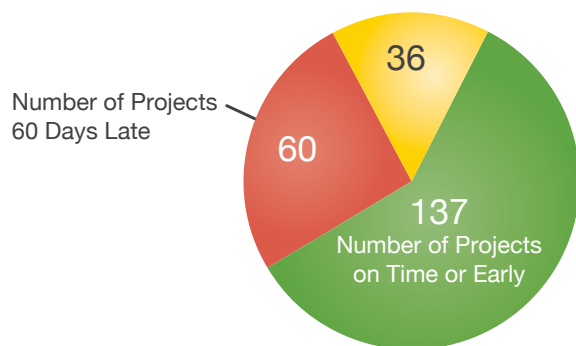
The Department's capital program is divided into two main parts: Preconstruction and Construction

PRECONSTRUCTION

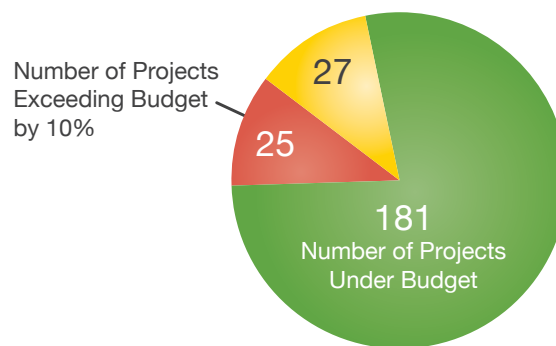
In 2013, the Department contracted for 283 preconstruction and environmental projects worth a total of more than \$44 million.

Current Projects

PRECONSTRUCTION SCHEDULE



PRECONSTRUCTION BUDGET

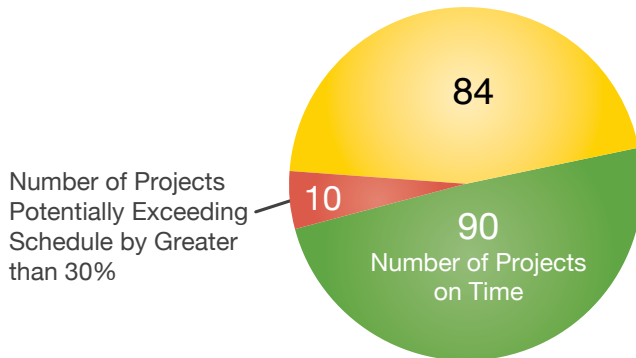


The goal for the preconstruction division is to have 85 percent of projects on schedule and 90 percent of projects on budget. Presently 72 percent of projects are on schedule and 80 percent of projects are under budget.

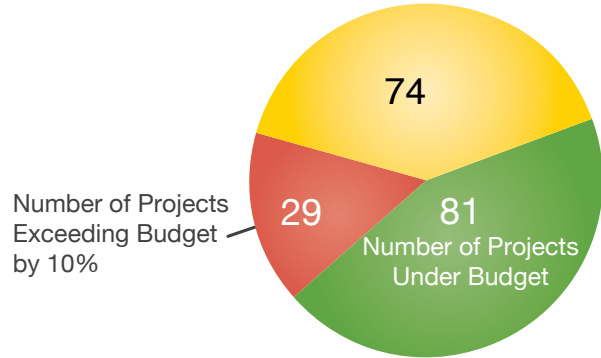
Once the necessary requirements and agreements are complete, construction can proceed. UDOT contracts with independent contractors for each project.

CONSTRUCTION

CONSTRUCTION SCHEDULE



CONSTRUCTION BUDGET



The goal for the construction division is to have 75 percent of projects on schedule and 90 percent of projects on budget. Presently 46 percent of projects are on schedule and 49 percent of projects are under budget.

UDOT also leverages the private sector. Less than three percent of those working on UDOT construction projects are employed by UDOT, with almost 16,000 contractors working on UDOT projects.

Benefits Of Alternative Contracting

UDOT prides itself on pioneering innovative and alternative contracting. The purpose of alternative contracting is to enhance the construction process by improving and speeding project delivery, without compromising safety or quality, while also meeting the goals and objectives of the Department.

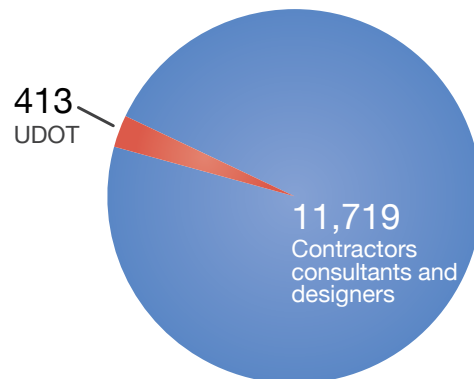
Examples include:

- **Construction Management, General Contractor (CMGC):** The CMGC process fosters a collaborative environment where contractors, designers and UDOT work together to design the project, after which the contractors and designers construct the project.

SR-193 extension was able to realize a \$1,028,000 savings by adding an extra line of girders on the structure, thus reducing the girder depth and lowering the amount of fill and wall associated with retaining the fill. On a smaller scale, the Deer Valley Drive Reconstruction in Park City used contractor input during design to slipline the storm drain instead of replacement to add significant savings to this local project.

In 2013, there have been seven active CMGC projects for a total of \$131,930,131 programmed funding.

EMPLOYEES ASSOCIATED WITH CONSTRUCTION PROJECTS



- **Design-Build:** Design-Build is a method to deliver a project in which the design and construction services are contracted by a single entity, rather than separating the two services as in a traditional project. This method is used to minimize risks for UDOT and to reduce the delivery schedule by overlapping the design phase and the construction phase of a project.

In 2013, the Design-Build method resulted in early completion of the I-15 in South Payson Project and the MP 8 Interchange Project in St. George. The I-15 South Payson Project extended the benefits of the I-15 CORE project further south nearly a full year ahead of schedule. The innovative and competitive Design-Build procurement process also benefited the project, with the best value contract being awarded to the contractor who found ways to come in nearly \$5 million lower than the next closest bidder, and nearly \$7 million lower than the Department's estimate.

- **Price + Time Bidding (P + T):** Every project bid at UDOT uses P+T. With this method, contractors bid a price and the number of days it will take them to construct each project. Price and time values are added together to determine the low bid. The contractor with the most aggressive schedule is often awarded the contract. When construction time is minimized using the P+T method, the impacts to business and drivers are reduced.

